

# Cost Proxy Model

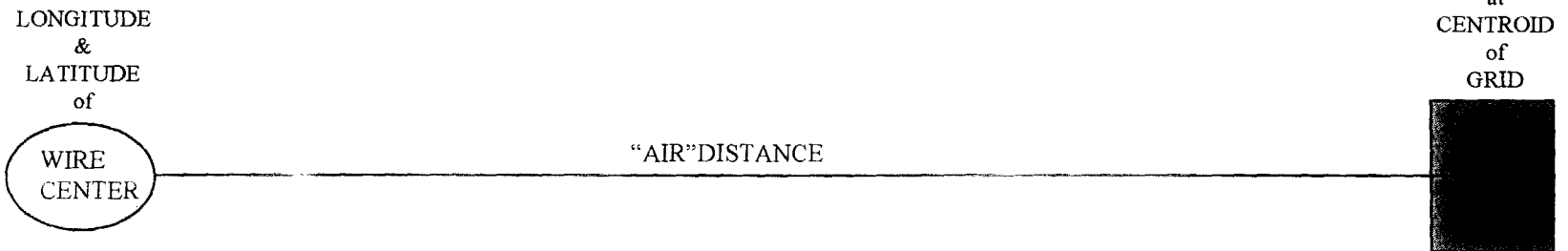
## Engineering Assumptions

- ⇒ Distribution Density Based Upon “Grid” and 8 Surrounding “Grids”
- ⇒ Feeder Density Based on Density of Wire Center
- ⇒ Pair Gain Systems Used When Feeder Distance > 9000 Ft.
- ⇒ Fiber is Used When Feeder Distance > 9000 Ft.
- ⇒ Current Cost of Equipment
- ⇒ Digital Switches
  - ⇒ DMS100 and Remotes
  - ⇒ 5E and Remotes

# Cost Proxy Model

## Customer Engine: Loop Lengths

⇒ Once “Grid” is associated with a CLLI, the Air Distance can be calculated

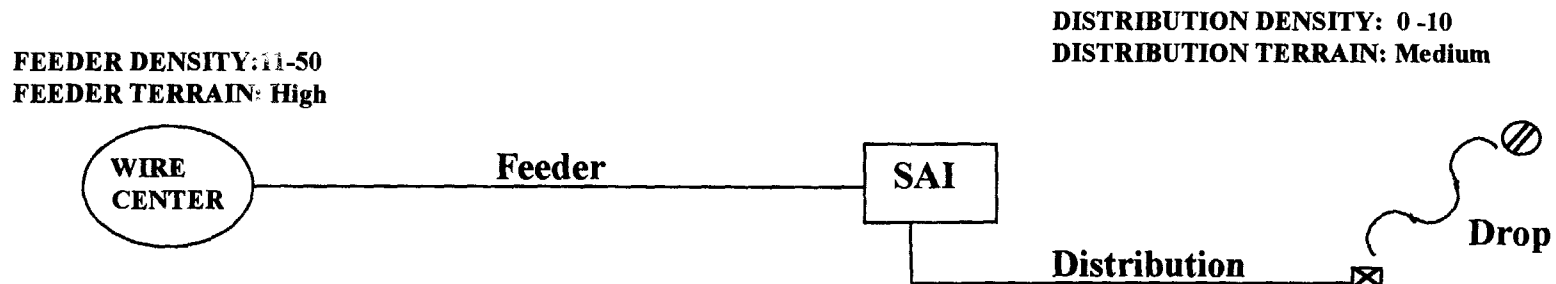


⇒ Terrain Types and Density Types are Then Determined

⇒ Air Distance Is Converted Into Feeder and Distribution, Then Into Route Distances

⇒ Conversions are Based Upon CPM User Input Tables

⇒ Current Tables are Based on Statistically Derived Ratios



# Cost Proxy Model

## Cost Engine: The Elements

⇒ The CPM cost Granularity is determined by the Costs Elements used, Currently

Aerial Copper Cable	Accounting, Advertising/Marketing
Aerial Fiber Cable	Billing
Buried Copper Cable	Common
Buried Fiber Cable	Directory Assistance
Conduit for Copper Cable	Employee Support
Conduit for Fiber Cable (under 9kft)	Engineering Overhead/Motor Vehicle
Conduit for Fiber Cable (over 9kft)	General Purpose Computers/Information Systems
Pair Gain Equipment	Miscellaneous
Pole for Copper Cable	Non-Recurring Burden
Pole for Fiber Cable	Non-Volume Sensitive Expenses and Investments
Serving Area Interface	Operator Assistance
Underground Copper Cable	Repair and Maintenance
Underground Fiber Cable	Sales
Switching Line Termination	Secondary Investment
Switching Message Cost - Flat Service	Shared
Switching Shared	Testing
	White Page Listing

# Cost Proxy Model

## Cost Engine: End Product

⇒ Using These Cost Tables, the CPM Creates this Internal Cost Matrix for Each Cost Element

			TERR_TYP			
			High	Medium	Normal	Water
			UNIT INVEST.	UNIT INVEST.	UNIT INVEST.	UNIT INVEST.
OSP_TYP	ELEMENT	DENS_TYP				
Copper Dist.	BUR_CU	Z1	0.2172	0.1694	0.1159	0.2172
		Z2	0.1306	0.1090	0.0779	0.1306
		Z3	0.1367	0.1169	0.0943	0.1367
		Z4	0.1315	0.1077	0.0848	0.1315
		Z5	0.1448	0.1162	0.0867	0.1448
		Z6	0.1329	0.1092	0.0870	0.1329
		Z7	0.1292	0.1018	0.0783	0.1292

# Cost Proxy Model

## Sample Calculation: Investment

⇒ Using the Customer File

Record	Lat_c	Long_c	Dens_typ	Terr_typ	Dist_Dist	SAI	CLLI
1	33.055	-116.805	Z1	N	5355	1001	ANHMCA11
2	33.055	-117.005	Z3	M	2300	1110	ANHMCA11

⇒ The Amount of Buried Copper Investment in Distribution for Each “Grid” is

First Record:

Distance	5355
x Percent of Buried (Z1)	60%
<u>x Unit Investment (Z1,N)</u>	<u>.1159</u>
TOTAL	372.39

Second Record:

Distance	2300
x Percent of Buried (Z3)	65%
<u>x Unit Investment (Z3,M)</u>	<u>.1169</u>
TOTAL	174.77

⇒ The Final Step is to Apply the Annual Change Factor to Obtain the Monthly Capital Costs

# Cost Proxy Model

## Sample Calculation: Operating Expense

⇒ Using the Operating Expense file

Cost Element	Unit of Measure	Operating Expense
ACCT	LINE	0.00427021
ADV_MKT	LINE	0
BILLING	LINE	0.21717087

⇒ The Operating Expenses are Adjusted Based on “ARMIS” Ratios

Company	Lines	Op. Exp. (less Depr.)	Ratio
CALAVERAS	2,446	\$ 1,205.90	3.9624
CITIZENS	79,229	\$ 433.96	1.4259
CONTEL	356,464	\$ 57.98	1.5377
ELI COR	770	\$ 763.51	5.7947
EVANS	8,736	\$ 787.10	2.5863
GTE-C	3,567,036	\$ 369.72	1.2148
PACIFIC	16,943,623	\$ 285.75	0.9389
VOLCANO	8,878	\$ 951.76	2.7988
WINTERHAVEN	1,398	\$ 757.88	2.4903

⇒ To Approximate the Values for a Specific Company

<u>Company</u>	<u>Element</u>	<u>Expense</u>
Contel	Billing	0.334

# Cost Proxy Model Reports

- ⇒ The Handouts Contain Sample Reports from the California Model
  - ⇒ Detail Reports
    - ⇒ State Total
  - ⇒ Summary Reports
    - ⇒ Company
    - ⇒ Density Type
    - ⇒ Terrain Type
    - ⇒ CLLI

**SAMPLE CPM DETAIL REPORT:****STATEWIDE AVERAGE**COST PROXY MODEL (CPM)  
STATEWIDE AVERAGESTATEWIDE AVERAGE LINES : 12794983  
MISSING LINES : 0

FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT (\$)	REVENUE (\$/MO)	OPERATING EXPENSE (\$/MO)	CAPITAL COST (\$/MO)
DST	AER_CU		342	19.04	\$0.00	\$0.00	\$0.30
	BUR_CU		1,623	153.12	\$0.00	\$0.00	\$2.16
	COND_CU	538 (FT)		23.49	\$0.00	\$0.00	\$0.24
	DROP	1.00		51.98	\$0.00	\$0.00	\$0.73
	POLE_CU	342 (FT)		18.17	\$0.00	\$0.00	\$0.20
	TERMINAL	1.00		53.38	\$0.00	\$0.00	\$0.77
	UGD_CU		538	19.88	\$0.00	\$0.00	\$0.29
DST	XXX		2,503	339.07	\$0.00	\$0.00	\$4.69
FDR	AER_CU		214	4.70	\$0.00	\$0.00	\$0.07
	AER_FO		839	6.28	\$0.00	\$0.00	\$0.08
	BUR_CU		51	2.25	\$0.00	\$0.00	\$0.03
	BUR_FO		221	3.12	\$0.00	\$0.00	\$0.04
	COND_CU	2,655 (FT)		25.24	\$0.00	\$0.00	\$0.26
	COND_FO	3,852 (FT)		8.39	\$0.00	\$0.00	\$0.08
	COND_FO9	2,523 (FT)		6.90	\$0.00	\$0.00	\$0.07
	PAIR_GN	0.43		141.88	\$0.00	\$0.00	\$2.45
	POLE_CU	214 (FT)		3.20	\$0.00	\$0.00	\$0.04
	POLE_FO	839 (FT)		10.55	\$0.00	\$0.00	\$0.12
	SAI	1.00		22.96	\$0.00	\$0.00	\$0.33
	UGD_CU		2,655	39.43	\$0.00	\$0.00	\$0.57
	UGD_FO		6,374	11.35	\$0.00	\$0.00	\$0.14
FDR	XXX		10,355	286.27	\$0.00	\$0.00	\$4.27
REVENU	REVENU_T	0.00		0.00	\$15.60	\$0.00	\$0.00
STDSVC	ACCT	1.00		0.00	\$0.00	\$0.00	\$0.00
	ADV_MKT	1.00		0.00	\$0.00	\$0.00	\$0.00
	BILLING	1.00		0.00	\$0.00	\$0.22	\$0.00
	COMMON	1.00		0.00	\$0.00	\$2.98	\$0.00
	DA	1.00		0.00	\$0.00	\$1.02	\$0.00
	EMPSUPT	1.00		0.00	\$0.00	\$0.09	\$0.00
	ENG_MV	1.00		0.00	\$0.00	\$0.00	\$0.00
	GPC_IS	1.00		0.00	\$0.00	\$0.13	\$0.00
	MISC	1.00		0.00	\$0.00	\$0.16	\$0.00
	NREC	1.00		0.00	\$0.00	\$0.37	\$0.00
	NVS_EXP	1.00		0.00	\$0.00	\$0.04	\$0.00
	NVS_INV	1.00		0.00	\$0.00	\$0.00	\$0.00
	OCS	1.00		0.00	\$0.00	\$0.07	\$0.00
	O_MINUS	1.00		0.00	\$0.00	\$0.12	\$0.00
	PMO_DIFF	1.00		0.00	\$0.00	\$0.00	\$0.00
	REPR_MTC	1.00		0.00	\$0.00	\$3.61	\$0.00
	SALES	1.00		0.00	\$0.00	\$0.05	\$0.00
	SEC_INV	1.00		0.00	\$0.00	\$0.00	\$1.11
	SHARED	1.00		0.00	\$0.00	\$4.01	\$0.00
	TESTING	1.00		0.00	\$0.00	\$0.00	\$0.00
	WP_LIST	1.00		0.00	\$0.00	\$0.34	\$0.00
STDSVC	XXX			0.00	\$0.00	\$13.23	\$1.12
SW/IO	SW_LT	1.00		112.88	\$0.00	\$0.00	\$1.65
	SW_MSG_F	119.22		117.88	\$0.00	\$0.00	\$1.73
	SW_SHR	8.36		8.36	\$0.00	\$0.00	\$0.12
SW/IO	XXX			239.13	\$0.00	\$0.00	\$3.50
XXX	XXX		12,858	864.46	\$15.60	\$13.23	\$13.58

SUBSIDY PER LINE: \$11.20

TOTAL COMPANY SUBSIDY: \$143,347,588



**SAMPLE CPM SUMMARY REPORT:****DENSITY ZONES**

Cost Proxy Model:Universal Service Edition  
 STATE AVERAGE  
 DENSITY TYPE SPECIFIC DATA - ALL COMPANIES

DENSITY TYPE	CABLE LENGTH (ft)	INVESTMENT (\$/line)	REVENUE (\$/line/mo)	OPERATING EXPENSE (\$/line/mo)	CAPITAL COST (\$/line/mo)	SUBSIDY (\$/line/mo)	LINES
Z1	47,557.15	\$7,482.82	\$16.55	\$16.47	\$100.82	\$100.74	77,082
Z2	35,548.46	\$2,604.67	\$16.20	\$16.26	\$37.56	\$37.63	268,128
Z3	24,257.52	\$2,013.53	\$15.98	\$15.04	\$29.37	\$28.43	348,418
Z4	18,103.45	\$1,112.19	\$16.03	\$14.31	\$17.42	\$15.69	768,422
Z5	13,385.93	\$866.70	\$15.90	\$13.40	\$13.81	\$11.31	3,260,958
Z6	11,421.61	\$725.18	\$15.52	\$12.93	\$11.67	\$9.08	5,820,827
Z7	8,379.08	\$526.72	\$15.08	\$12.63	\$8.58	\$6.12	2,251,089

**SAMPLE CPM SUMMARY REPORT:****TERRAIN TYPE**

Cost Proxy Model:Universal Service Edition  
 STATE AVERAGE  
 TERRAIN TYPE SPECIFIC DATA - ALL COMPANIES

TERRAIN TYPE	CABLE LENGTH (ft)	INVESTMENT (\$/line)	REVENUE (\$/line/mo)	OPERATING EXPENSE (\$/line/mo)	CAPITAL COST (\$/line/mo)	SUBSIDY (\$/line/mo)	LINES
H	17,187.07	\$1,307.79	\$15.34	\$13.01	\$19.57	\$17.24	470,916
M	16,517.20	\$1,133.23	\$15.63	\$13.68	\$17.36	\$15.42	1,562,440
N	12,141.80	\$809.73	\$15.59	\$13.15	\$12.80	\$10.36	10,648,540
W	12,060.86	\$988.29	\$17.60	\$15.30	\$15.29	\$12.99	113,027

**SAMPLE CPM SUMMARY REPORT:****COMPANIES**

Cost Proxy Model:Universal Service Edition

STATE AVERAGE

COMPANY SPECIFIC DATA - ALL COMPANIES

COMPANY	CABLE LENGTH (ft)	INVESTMENT (\$/line)	REVENUE (\$/line/mo)	OPERATING EXPENSE (\$/line/mo)	CAPITAL COST (\$/line/mo)	SUBSIDY (\$/line/mo)	LINES
CALAVERAS	22,986.66	\$3,545.27	\$20.08	\$50.85	\$52.90	\$83.66	1,838
CALIF-OREGON	16,431.02	\$1,815.81	\$23.85	\$42.33	\$28.70	\$47.18	1,681
CITIZENS	18,915.78	\$1,490.87	\$21.35	\$18.30	\$22.34	\$19.28	59,926
CITIZENS TUOLUMNE	28,793.69	\$2,035.58	\$15.70	\$39.06	\$31.56	\$54.92	5,325
CONTEL	15,769.83	\$1,293.13	\$20.35	\$19.73	\$19.84	\$19.22	278,198
CP NATIONAL	8,850.33	\$1,094.70	\$20.35	\$38.68	\$18.53	\$36.86	9,762
DUCOR	15,909.55	\$2,312.05	\$20.35	\$74.36	\$38.25	\$92.26	598
EVANS	11,074.86	\$1,262.11	\$20.35	\$33.19	\$20.29	\$33.13	10,190
FORESTHILL	25,564.35	\$1,986.98	\$14.15	\$27.08	\$30.20	\$43.13	2,143
GTE-C	13,407.73	\$833.03	\$20.75	\$15.59	\$13.35	\$8.19	2,685,264
HAPPY VALLEY	24,387.34	\$2,469.07	\$20.35	\$36.93	\$37.05	\$53.63	2,640
HORNITOS	32,946.79	\$5,954.28	\$14.75	\$62.40	\$85.65	\$133.31	409
KERMAN	14,385.17	\$1,411.04	\$22.90	\$26.47	\$22.07	\$25.63	5,485
PACIFIC	12,490.32	\$848.09	\$13.97	\$12.05	\$13.26	\$11.34	9,620,458
PINNACLES	18,524.79	\$4,689.92	\$20.35	\$83.81	\$72.64	\$136.11	15
PONDEROSA	30,389.63	\$2,728.59	\$21.35	\$60.51	\$42.68	\$81.84	5,346
ROSEVILLE	15,131.80	\$890.98	\$14.30	\$18.05	\$14.58	\$18.33	68,421
SIERRA	36,084.98	\$2,552.20	\$20.35	\$43.32	\$38.79	\$61.76	14,034
SISKIYOU	25,110.82	\$2,133.03	\$18.70	\$49.70	\$33.50	\$64.50	3,108
VOLCANO	21,220.38	\$1,939.67	\$20.35	\$35.91	\$30.24	\$45.81	4,407
WEST COAST	22,180.74	\$1,472.59	\$14.60	\$64.47	\$25.85	\$75.72	13,810
WINTERHAVEN	22,705.53	\$1,869.49	\$20.35	\$31.96	\$28.79	\$40.39	1,865

**SAMPLE CPM SUMMARY REPORT:****CBGs**

Cost Proxy Model:Universal Service Edition  
 STATE AVERAGE  
 CENSUS BLOCK GROUP SPECIFIC DATA

CENSUS BLOCK GROUP	CABLE LENGTH (ft)	INVESTMENT (\$/line)	REVENUE (\$/line/mo)	OPERATING EXPENSE (\$/line/mo)	CAPITAL COST (\$/line/mo)	SUBSIDY (\$/line/mo)	LINES
60014511002	53,429.72	\$8,324.75	\$20.35	\$33.19	\$112.15	\$124.99	57
60470001002	53,105.91	\$4,122.76	\$20.35	\$33.19	\$58.13	\$70.97	4
60470002001	35,545.30	\$2,734.15	\$20.35	\$33.19	\$40.52	\$53.36	123
60470002002	13,471.06	\$1,429.22	\$20.35	\$33.19	\$22.56	\$35.40	92
60470002006	12,015.71	\$1,352.38	\$20.35	\$33.19	\$21.38	\$34.22	12
60470003011	5,956.07	\$770.76	\$20.35	\$33.19	\$13.55	\$26.38	377
60470003012	4,604.18	\$582.73	\$20.35	\$33.19	\$10.93	\$23.77	394
60470003013	13,391.98	\$1,469.31	\$20.35	\$33.19	\$23.61	\$36.44	230
60470003021	27,437.57	\$2,425.62	\$20.35	\$33.19	\$36.89	\$49.73	355
60470003022	10,805.52	\$1,168.68	\$20.35	\$33.19	\$19.19	\$32.02	905
60470003023	637.85	\$364.21	\$20.35	\$33.19	\$8.04	\$20.88	422
60470003024	3,915.07	\$545.90	\$20.35	\$33.19	\$10.44	\$23.28	323
60470003025	5,603.57	\$750.61	\$20.35	\$33.19	\$13.28	\$26.11	157
60470003026	6,680.99	\$692.44	\$20.35	\$33.19	\$12.37	\$25.21	172
60470004005	34,032.45	\$2,373.59	\$20.35	\$33.19	\$35.74	\$48.57	4
60470005013	21,887.45	\$2,159.96	\$20.35	\$33.19	\$33.63	\$46.47	16
60470005014	22,452.77	\$2,040.94	\$20.35	\$33.19	\$31.89	\$44.73	24
60470005015	28,075.15	\$2,306.90	\$20.35	\$33.19	\$35.19	\$48.03	184
60470005022	35,161.02	\$2,364.15	\$20.35	\$33.19	\$35.52	\$48.35	40
60470005023	30,001.52	\$2,304.40	\$20.35	\$33.19	\$35.04	\$47.88	134
60470009001	47,265.67	\$3,538.87	\$20.35	\$33.19	\$50.64	\$63.47	59
60470301003	18,748.65	\$2,069.53	\$20.35	\$33.19	\$32.58	\$45.41	12
60855127982	38,093.49	\$6,691.97	\$20.35	\$33.19	\$92.52	\$105.35	27
60855135963	33,915.67	\$5,901.16	\$20.35	\$33.19	\$83.06	\$95.90	1
60855135973	38,350.92	\$6,409.14	\$20.35	\$33.19	\$89.29	\$102.12	0
60855135983	43,372.23	\$6,984.26	\$20.35	\$33.19	\$96.34	\$109.17	1
60990032001	5,525.25	\$631.43	\$20.35	\$33.19	\$11.57	\$24.41	954
60990032002	2,823.53	\$484.97	\$20.35	\$33.19	\$9.64	\$22.47	925
60990032003	6,465.07	\$679.72	\$20.35	\$33.19	\$12.20	\$25.04	481
60990032004	3,203.24	\$465.58	\$20.35	\$33.19	\$9.32	\$22.16	750
60990032005	7,140.45	\$733.72	\$20.35	\$33.19	\$12.93	\$25.77	356
60990032007	4,470.91	\$614.98	\$20.35	\$33.19	\$11.39	\$24.23	698
60990033981	15,741.49	\$1,835.04	\$20.35	\$33.19	\$28.37	\$41.20	369
60990033982	11,530.48	\$1,478.43	\$20.35	\$33.19	\$23.71	\$36.55	234
60990033983	53,385.84	\$4,743.18	\$20.35	\$33.19	\$67.11	\$79.94	34
60990033984	16,359.45	\$2,297.12	\$20.35	\$33.19	\$35.09	\$47.93	90
60990033985	15,712.35	\$1,657.58	\$20.35	\$33.19	\$26.32	\$39.16	484
60990033986	19,769.98	\$2,002.50	\$20.35	\$33.19	\$31.15	\$43.99	307
60990033987	12,232.60	\$1,457.25	\$20.35	\$33.19	\$22.84	\$35.67	15
60990034981	30,300.51	\$2,519.14	\$20.35	\$33.19	\$37.96	\$50.79	54
60990034982	20,742.88	\$2,395.66	\$20.35	\$33.19	\$36.77	\$49.61	7
60990041972	38,350.92	\$6,409.14	\$20.35	\$33.19	\$89.29	\$102.12	0

**SAMPLE CPM SUMMARY REPORT:****CENTRAL OFFICE**

Cost Proxy Model:Universal Service Edition  
STATE AVERAGE  
CLLI SPECIFIC DATA - ALL COMPANIES

CLLI	CABLE LENGTH (ft)	INVESTMENT (\$/line)	REVENUE (\$/line/mo)	OPERATING EXPENSE (\$/line/mo)	CAPITAL COST (\$/line/mo)	SUBSIDY (\$/line/mo)	LINES
ABRYCAXF	37,269.10	\$2,801.43	\$21.35	\$60.51	\$43.70	\$82.86	2,672
ACTNCA11	17,396.98	\$1,960.19	\$13.97	\$12.05	\$28.63	\$26.71	2,072
ADINCAXF	7,628.03	\$1,286.03	\$21.35	\$18.30	\$19.66	\$16.61	154
ADLNCAXF	11,991.70	\$1,225.39	\$20.35	\$19.73	\$18.87	\$18.25	6,396
AGDLCA11	22,855.24	\$2,180.23	\$13.97	\$12.05	\$31.52	\$29.60	1,146
AGORCA11	15,477.39	\$1,105.86	\$13.97	\$12.05	\$17.10	\$15.18	21,474
ALBYCA11	8,258.29	\$607.32	\$13.97	\$12.05	\$9.67	\$7.75	31,773
ALGHCA11	18,442.28	\$2,081.46	\$13.97	\$12.05	\$30.03	\$28.11	29
ALHBCA01	9,337.44	\$619.30	\$13.97	\$12.05	\$9.92	\$8.00	42,418
ALMDCA11	9,802.15	\$651.31	\$13.97	\$12.05	\$10.42	\$8.50	33,902
ALPGCAXF	5,156.17	\$961.41	\$20.35	\$19.73	\$15.21	\$14.59	342
ALPICA12	20,671.44	\$1,743.65	\$13.97	\$12.05	\$25.26	\$23.34	7,292
ALPNCAXF	15,324.46	\$3,263.25	\$20.35	\$19.73	\$47.33	\$46.71	80
ALTRCAXF	27,695.47	\$1,863.20	\$21.35	\$18.30	\$27.09	\$24.04	1,911
ANCMCA01	14,830.64	\$1,607.79	\$13.97	\$12.05	\$23.51	\$21.59	2,207
ANGWCA11	13,908.45	\$1,750.99	\$13.97	\$12.05	\$25.22	\$23.30	1,464
ANHMCA01	13,513.97	\$827.07	\$13.97	\$12.05	\$13.25	\$11.33	61,845
ANHMCA11	11,354.65	\$718.98	\$13.97	\$12.05	\$11.53	\$9.61	55,951
ANHMCA12	6,319.21	\$534.58	\$13.97	\$12.05	\$8.54	\$6.62	6,667
ANNPCA11	13,903.41	\$2,742.57	\$13.97	\$12.05	\$39.58	\$37.66	129
ANTCCA11	11,212.81	\$782.23	\$13.97	\$12.05	\$12.39	\$10.47	28,079
ANZACAXF	58,821.12	\$3,569.78	\$20.75	\$15.59	\$49.57	\$44.41	3,359
APTSCA12	11,132.49	\$897.96	\$13.97	\$12.05	\$13.92	\$11.99	10,671
APVYCAXF	16,013.77	\$1,001.98	\$20.35	\$19.73	\$16.30	\$15.69	15,821
ARBCCAXF	12,495.08	\$1,377.56	\$20.35	\$38.68	\$22.53	\$40.87	1,218
ARCDCA11	10,631.33	\$783.34	\$13.97	\$12.05	\$12.60	\$10.68	21,042
ARCTCA11	10,736.66	\$878.68	\$13.97	\$12.05	\$13.53	\$11.61	8,921
ARGRCA12	13,560.73	\$1,019.06	\$13.97	\$12.05	\$15.70	\$13.78	17,961
ARHDCAXF	10,983.53	\$1,176.20	\$20.75	\$15.59	\$17.88	\$12.72	2,250
ARMSCA11	13,400.28	\$1,686.98	\$13.97	\$12.05	\$25.01	\$23.09	892
ARNLCA11	14,596.48	\$1,444.73	\$13.97	\$12.05	\$21.20	\$19.28	2,840
ARSNCA11	13,757.92	\$1,263.03	\$13.97	\$12.05	\$18.83	\$16.90	8,352
ARTNCA11	15,009.36	\$932.13	\$13.97	\$12.05	\$14.73	\$12.81	47,288
ARTSCAXF	10,992.53	\$711.71	\$20.75	\$15.59	\$11.69	\$6.53	32,814
ARVNCA11	7,044.68	\$876.85	\$13.97	\$12.05	\$13.25	\$11.33	3,655
ASMTCA11	28,429.33	\$4,611.51	\$13.97	\$12.05	\$62.85	\$60.93	133
ATSCCA11	12,523.55	\$962.77	\$13.97	\$12.05	\$14.87	\$12.95	11,309
ATWRCA12	11,615.93	\$871.50	\$13.97	\$12.05	\$13.60	\$11.68	14,858
AUBNCA01	19,789.79	\$1,245.76	\$13.97	\$12.05	\$19.05	\$17.13	17,537
AUBNCA11	13,419.13	\$1,384.08	\$13.97	\$12.05	\$20.62	\$18.70	4,228
AVBHCA11	11,020.16	\$1,555.96	\$13.97	\$12.05	\$22.77	\$20.85	830
AVLNCA11	5,979.25	\$738.69	\$13.97	\$12.05	\$11.26	\$9.34	1,685
AVNLCA12	14,062.60	\$1,004.28	\$13.97	\$12.05	\$14.63	\$12.71	2,574
AZUSCAXF	14,693.83	\$826.97	\$20.75	\$15.59	\$13.46	\$8.30	25,263
BAKRCA11	42,085.77	\$8,098.01	\$13.97	\$12.05	\$107.96	\$106.04	6
BALBCA01	9,558.51	\$662.19	\$13.97	\$12.05	\$10.27	\$8.35	5,555
BBCYCAXF	12,303.28	\$1,252.51	\$20.35	\$19.73	\$19.27	\$18.65	2,809
BBLKCAXF	15,986.56	\$1,425.14	\$20.35	\$19.73	\$21.87	\$21.25	5,176
BCWYCA11	9,035.44	\$864.40	\$13.97	\$12.05	\$13.36	\$11.44	2,462
BDBACA11	13,548.96	\$1,586.87	\$13.97	\$12.05	\$23.36	\$21.43	693
BDGRCAXF	10,928.01	\$2,568.43	\$20.75	\$15.59	\$36.88	\$31.72	141
BEALCA11	30,658.47	\$2,257.37	\$13.97	\$12.05	\$32.54	\$30.62	1,530
BELLCA11	6,686.92	\$499.79	\$13.97	\$12.05	\$8.08	\$6.16	26,255
BELRCAXF	10,955.64	\$788.65	\$20.75	\$15.59	\$12.69	\$7.53	9,936
BGCKCAXF	9,790.62	\$1,328.37	\$21.35	\$60.51	\$23.56	\$62.71	47
BGGSCA11	9,953.53	\$1,258.07	\$13.97	\$12.05	\$18.81	\$16.89	1,182
BGPICAXF	5,174.66	\$736.87	\$20.35	\$19.73	\$11.96	\$11.35	733
BGSRCA11	54,312.55	\$3,356.95	\$13.97	\$12.05	\$46.15	\$44.23	364
BGVLCA11	26,688.25	\$4,866.56	\$13.97	\$12.05	\$67.69	\$65.77	126

# THE COST PROXY MODEL©

## CALIFORNIA UNIVERSAL SERVICE SUBSIDY

This package contains the methodology (including descriptions of changes since the last issue) and output for the Cost Proxy Model© California statewide universal service run. The output includes the total state and individual company results. Also included is an addendum concerning Pacific Bell's results.

The output report page for Pacific Bell is **Proprietary and Confidential** as it contains OANAD cost information.   \*\* REDACTED \*\*

## **COST PROXY MODEL© STATEWIDE RUN METHODOLOGY**

The Cost Proxy Model has estimated the California Universal Service Subsidy requirements. Changes made to the model for this statewide run are:

- use of commercial databases for geographic line estimates,
- additional switch locations and cost methods,
- company specific operating expense estimates,
- OANAD expense updates,
- Shared and Common,
- engineering assumptions changes responding to Coalition suggestions.

## **COMMERCIAL DATABASES**

INDETEC International obtained a database from Bamberg - Handley, Inc. with population, income, ethnic and other demographic information at the 1/100th of a degree of latitude and longitude grid. Analysis was conducted by INDETEC to relate the household and daytime population data to actual Pacific Bell density and residence line counts. The results of the comparison was then applied to the non-Pacific Bell territory by using ratios. The household to residence conversion ratio was 1.175 (R-square>90%). The Daytime Population to Business line conversion ratio was 0.05 (R-square>90%).

Pacific Bell provided to geocode the grid level. This data provided the LEC wirecenters or exchanges based on Pacific's wirecenter boundaries and the CPUC Telephone Exchange map that served a particular grid, the distance from the centroid of the grid to the wirecenter, and the square mileage of each grid. Work is continuing with GTE-C to include their wirecenter boundaries in exchanges with multiple wirecenters.

## **SWITCH LOCATIONS AND COST METHODS**

Pacific Bell used the January 1996 Local Exchange Routing Guide (LERG) to obtain switch address, technology type and carrier for each wirecenter.

Geocoding of the wirecenters were based on number, street, city and zip code in the LERG. Matchmaker software was used to convert the address to latitude and longitude, with the V and H coordinates used if Matchmaker could not assign the latitude and longitude. Approximately 10% of the wirecenters did not geocode in Matchmaker and the V and H values were converted to latitude and longitude based on Bellcore algorithm.

Technology type was analyzed to ensure only digital switches were used. Analog switches were replaced with expected digital counterparts. Cost characteristics from Pacific's SCIS runs of the digital switches included: DMS-100, DMS Remote, 5ESS and

5ESS remote. If a switch technology did not match the switch choices mentioned, then a substitute was made (GTE Tel Ops indicated their GT5 and GTR switches have DMS cost characteristics). If the cost characteristics of a switch technology could not be determined then a DMS-100 switch was assumed .

Switching cost calculations were modified to more closely relate the data to that filed as usage costs in the OANAD proceeding. Backup data to the 24 hour average cost of usage for flat and measured service was analyzed to determine the average cost per message for each type of switch (including remotes). The switch types were determined at each wirecenter described above. In order to maintain investment information on a per line basis, the busy hour investment data was first multiplied by 26 to obtain total monthly cost, then multiplied by 12 to obtain annual costs and, finally, divided by the annual cost factor for switching investments to convert this cost to an equivalent investment.

## **OPERATING EXPENSE ESTIMATES**

Due to the wide variation in California LEC sizes (190 lines to 17,000,000 lines), expenses per line exhibit large variation. Using ARMIS data, a statewide weighted average expense per access line was calculated (this excluded depreciation expense). A factor for each LEC's (except Alltel, CP National and Roseville) total expense per access line compared to Pacific Bell's total expense per access line was developed from the ARMIS reports for 1993. (Ratios for Foresthill and Pinnacles were based on 1994 data). Combining the statewide average expense per line with the actual Pacific Bell Operating Expense data, statewide average values were generated. The ratios from ARMIS for each company were then applied to the statewide average numbers to estimate a particular companies operating expenses. Pacific Bell's factor is 0.93, to reflect a lower than average cost. West Coast, CP National and Roseville were estimated using comparable companies based on size.

## **OANAD EXPENSE UPDATES**

For Universal Service costs Flat and Measured Usage, Directory Assistance and Operator Minus costs are sourced from Pacific's OANAD filing. These expenses are being updated for the OANAD filing.

## **SHARED AND COMMON EXPENSES ALLOCATION**

Changes in the identification of Shared Family costs when the cost object is Universal service, rather than volumes of individual services.



#### Business, Residence, Public Family.

These costs are the costs of billing end user services. They are volume sensitive with the quantity of accounts, not the volume of services billed on each bill. All costs which are volume sensitive with residential accounts are directly related to Universal Service.

Thus, this entire family cost becomes volume sensitive, with the portion being caused by Universal Service the proportion of total accounts which are residential accounts. That portion was directly assigned to Universal Service. The remainder would be assigned to business and public services.

#### Residence Family

A portion of these costs are the costs associated with residence service center costs which are volume sensitive with residential accounts. All costs which are volume sensitive with residential accounts are directly related to Universal Service. That portion of the family costs which are volume sensitive with residential accounts are directly assigned to Universal Service. The remainder of the costs of the Residence Family are treated as if they are caused by discretionary residential services, with none of these costs being assigned to Universal Service.

### **ENGINEERING ASSUMPTIONS CHANGES**

Due to numerous discussions with all parties involved in the proxy modeling, changes were made to the engineering assumptions.

Route to air ratios for feeder were based on the OANAD Residential Loop sample and additional sampling for the two less dense zones. Cable maps were read to obtain actual route distances. The prior geocoding process provided the air distances from the central offices to the serving area interfaces. The route to air ratios were calculated for each of the seven density zones, and applied to the air distances for ALL of the census derived data. Due to differences in timing of the air distance calculation and the map reading, some customers have changed phone numbers and locations. This affects the route to air calculation if the customer took a phone number to a different location. Therefore route to air ratios under 1.0 or over 4.0 were excluded from the sample.

Other changes include:

- Pole line cost factor for the occurrence of 2nd feeder cable on a pole,
- Copper feeder utilization adding wirecenters that were missing from prior studies,
- Update distribution utilization for 2nd lines,
- Change % mix for aerial, buried and underground due to additional wirecenters,
- Average cable sizes changed to reflect actual fill instead of exhaust design fills,
- Terminal and drop costs were upgraded due to additional field information.

## **ADDENDUM CONCERNING PACIFIC BELL'S RESULTS**

The goal of the cost proxy model is the calculation of subsidy amounts that are to be available to any qualified provider of universal service. The amount of the subsidy is the difference between the basic line revenue and the cost calculated by the model. The cost calculated by the model is to be the LRIC plus appropriate shared and common costs for the lines being provided.

The LRIC is based on the best current technology applied in the most efficient ways. The shared and common costs are those required for that operation. This total forward looking cost is significantly lower than Pacific Bell's current costs of operation.

Pacific Bell's current total costs are recovered through all of its revenues as is appropriate. The calculation of residential line universal service subsidies using LRIC plus shared and common does not reflect Pacific's full cost, therefore the cost-revenue comparison can not include revenues other than access line revenues (e.g., should NOT include voice mail, yellow pages, etc.). If at any point these proceedings were to embark upon a directions of considering the impact of revenues from other than basic residence lines, then Pacific would need to present its total costs for recovery considerations.

COST PROXY MODEL (CPM)  
PRELIMINARY OUTPUT  
STATEWIDE AVERAGE

STATEWIDE AVERAGE LINES : 12794983  
MISSING LINES : 0

FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT (\$)	REVENUE (\$/MO)	OPERATING EXPENSE (\$/MO)	CAPITAL COST (\$/MO)
DST	AER_CU		342	19.04	\$0.00	\$0.00	\$0.30
	BUR_CU		1,623	153.12	\$0.00	\$0.00	\$2.16
	COND_CU	538 (FT)		23.49	\$0.00	\$0.00	\$0.24
	DROP	1.00		51.98	\$0.00	\$0.00	\$0.73
	POLE_CU	342 (FT)		18.17	\$0.00	\$0.00	\$0.20
	TERMINAL	1.00		53.38	\$0.00	\$0.00	\$0.77
	UGD_CU		538	19.88	\$0.00	\$0.00	\$0.29
DST	XXX		2,503	339.07	\$0.00	\$0.00	\$4.69
FDR	AER_CU		214	4.70	\$0.00	\$0.00	\$0.07
	AER_FO		839	6.28	\$0.00	\$0.00	\$0.08
	BUR_CU		51	2.25	\$0.00	\$0.00	\$0.03
	BUR_FO		221	3.12	\$0.00	\$0.00	\$0.04
	COND_CU	2,655 (FT)		25.24	\$0.00	\$0.00	\$0.26
	COND_FO	3,852 (FT)		8.39	\$0.00	\$0.00	\$0.08
	COND_FO9	2,523 (FT)		6.90	\$0.00	\$0.00	\$0.07
	PAIR_GN	0.43		141.88	\$0.00	\$0.00	\$2.45
	POLE_CU	214 (FT)		3.20	\$0.00	\$0.00	\$0.04
	POLE_FO	839 (FT)		10.55	\$0.00	\$0.00	\$0.12
	SAI	1.00		22.96	\$0.00	\$0.00	\$0.33
	UGD_CU		2,655	39.43	\$0.00	\$0.00	\$0.57
	UGD_FO		6,374	11.35	\$0.00	\$0.00	\$0.14
FDR	XXX		10,355	286.27	\$0.00	\$0.00	\$4.27
REVENU	REVENU_T	0.00		0.00	\$15.60	\$0.00	\$0.00
STD SVC	ACCT	1.00		0.00	\$0.00	\$0.00	\$0.00
	ADV_MKT	1.00		0.00	\$0.00	\$0.00	\$0.00
	BILLING	1.00		0.00	\$0.00	\$0.22	\$0.00
	COMMON	1.00		0.00	\$0.00	\$2.98	\$0.00
	DA	1.00		0.00	\$0.00	\$1.02	\$0.00
	EMPSUPT	1.00		0.00	\$0.00	\$0.09	\$0.00
	ENG_MV	1.00		0.00	\$0.00	\$0.00	\$0.00
	GPC_IS	1.00		0.00	\$0.00	\$0.13	\$0.00
	MISC	1.00		0.00	\$0.00	\$0.16	\$0.00
	NREC	1.00		0.00	\$0.00	\$0.37	\$0.00
	NVS_EXP	1.00		0.00	\$0.00	\$0.04	\$0.00
	NVS_INV	1.00		0.00	\$0.00	\$0.00	\$0.00
	OCS	1.00		0.00	\$0.00	\$0.07	\$0.00
	O_MINUS	1.00		0.00	\$0.00	\$0.12	\$0.00
	REPR_MTC	1.00		0.00	\$0.00	\$3.61	\$0.00
	SALES	1.00		0.00	\$0.00	\$0.05	\$0.00
	SEC_INV	1.00		0.00	\$0.00	\$0.00	\$1.11
	SHARED	1.00		0.00	\$0.00	\$4.01	\$0.00
	TESTING	1.00		0.00	\$0.00	\$0.00	\$0.00
	WP_LIST	1.00		0.00	\$0.00	\$0.34	\$0.00
STD SVC	XXX			0.00	\$0.00	\$13.23	\$1.12
SW/IO	SW_LT	1.00		112.88	\$0.00	\$0.00	\$1.65
	SW_MSG_F	119.22		117.88	\$0.00	\$0.00	\$1.73
	SW_SHP	8.36		8.36	\$0.00	\$0.00	\$0.12
SW/IO	XXX			239.13	\$0.00	\$0.00	\$3.50
XXX	XXX		12,858	864.46	\$15.60	\$13.23	\$13.58

SUBSIDY PER LINE: \$11.20

TOTAL COMPANY SUBSIDY: \$143,347,588

COST PROXY MODEL (CPM)  
PRELIMINARY OUTPUT  
COMPANY SPECIFIC DATA

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COMPANY : CALAVERAS

LINES : 1,838

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FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT (\$)	REVENUE (\$/MO)	OPERATING EXPENSE (\$/MO)	CAPITAL COST (\$/MO)
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DST	AER_CU		2,002	182.51	\$0.00	\$0.00	\$2.83
	BUR_CU		3,357	415.80	\$0.00	\$0.00	\$5.85
	COND_CU	135 (FT)		12.43	\$0.00	\$0.00	\$0.13
	DROP	1.00		147.61	\$0.00	\$0.00	\$2.08
	POLE_CU	2,002 (FT)		234.52	\$0.00	\$0.00	\$2.62
	TERMINAL	1.00		211.38	\$0.00	\$0.00	\$3.06
	UGD_CU		135	5.90	\$0.00	\$0.00	\$0.09
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DST	XXX		5,494	1,210.14	\$0.00	\$0.00	\$16.66
FDR	AER_CU		978	36.39	\$0.00	\$0.00	\$0.56
	AER_FO		7,836	311.75	\$0.00	\$0.00	\$3.82
	BUR_CU		376	33.30	\$0.00	\$0.00	\$0.47
	BUR_FO		3,904	212.29	\$0.00	\$0.00	\$2.56
	COND_CU	768 (FT)		20.64	\$0.00	\$0.00	\$0.21
	COND_FO	3,631 (FT)		96.68	\$0.00	\$0.00	\$0.98
	COND_FO9	0 (FT)		0.00	\$0.00	\$0.00	\$0.00
	PAIR_GN	0.61		655.57	\$0.00	\$0.00	\$11.31
	POLE_CU	978 (FT)		37.59	\$0.00	\$0.00	\$0.42
	POLE_FO	7,836 (FT)		512.64	\$0.00	\$0.00	\$5.73
	SAI	1.00		72.57	\$0.00	\$0.00	\$1.05
	UGD_CU		768	12.97	\$0.00	\$0.00	\$0.19
	UGD_FO		3,631	92.30	\$0.00	\$0.00	\$1.12
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FDR	XXX		17,493	2,094.70	\$0.00	\$0.00	\$28.43
REVENU	REVENU_T	0.00		0.00	\$20.08	\$0.00	\$0.00
STDSVC	ACCT	1.00		0.00	\$0.00	\$0.02	\$0.00
	ADV_MKT	1.00		0.00	\$0.00	\$0.00	\$0.00
	BILLING	1.00		0.00	\$0.00	\$0.86	\$0.00
	COMMON	1.00		0.00	\$0.00	\$11.44	\$0.00
	DA	1.00		0.00	\$0.00	\$3.92	\$0.00
	EMPSUPT	1.00		0.00	\$0.00	\$0.36	\$0.00
	ENG_MV	1.00		0.00	\$0.00	\$0.02	\$0.00
	GPC_IS	1.00		0.00	\$0.00	\$0.50	\$0.00
	MISC	1.00		0.00	\$0.00	\$0.63	\$0.00
	NREC	1.00		0.00	\$0.00	\$1.43	\$0.00
	NVS_EXP	1.00		0.00	\$0.00	\$0.14	\$0.00
	NVS_INV	1.00		0.00	\$0.00	\$0.00	\$0.01
	OCS	1.00		0.00	\$0.00	\$0.28	\$0.00
	O_MINUS	1.00		0.00	\$0.00	\$0.46	\$0.00
	REPR_MTC	1.00		0.00	\$0.00	\$13.87	\$0.00
	SALES	1.00		0.00	\$0.00	\$0.20	\$0.00
	SEC_INV	1.00		0.00	\$0.00	\$0.00	\$4.28
	SHARED	1.00		0.00	\$0.00	\$15.40	\$0.00
	TESTING	1.00		0.00	\$0.00	\$0.00	\$0.00
	WP_LIST	1.00		0.00	\$0.00	\$1.31	\$0.00
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STDSVC	XXX			0.00	\$0.00	\$50.85	\$4.29
SW/IO	SW_LT	1.00		134.22	\$0.00	\$0.00	\$1.97
	SW_MSG_F	112.10		86.95	\$0.00	\$0.00	\$1.27
	SW_SHR	19.27		19.27	\$0.00	\$0.00	\$0.28
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SW/IO	XXX			240.44	\$0.00	\$0.00	\$3.52
XXX	XXX		22,987	3,545.27	\$20.08	\$50.85	\$52.90

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SUBSIDY PER LINE: \$83.66 TOTAL COMPANY SUBSIDY: \$153,746

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COST PROXY MODEL (CPM)  
PRELIMINARY OUTPUT  
COMPANY SPECIFIC DATA

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COMPANY : CALIF-OREGON

LINES : 1,681

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FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT (\$)	REVENUE (\$/MO)	OPERATING EXPENSE (\$/MO)	CAPITAL COST (\$/MO)
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DST	AER_CU		1,438	137.19	\$0.00	\$0.00	\$2.13
	BUR_CU		2,347	292.93	\$0.00	\$0.00	\$4.12
	COND_CU	82 (FT)		7.47	\$0.00	\$0.00	\$0.08
	DROP	1.00		133.14	\$0.00	\$0.00	\$1.87
	POLE_CU	1,438 (FT)		177.65	\$0.00	\$0.00	\$1.99
	TERMINAL	1.00		190.87	\$0.00	\$0.00	\$2.77
	UGD_CU		82	3.57	\$0.00	\$0.00	\$0.05
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DST	XXX		3,867	942.82	\$0.00	\$0.00	\$13.01
FDR	AER_CU		826	32.25	\$0.00	\$0.00	\$0.50
	AER_FO		4,882	58.24	\$0.00	\$0.00	\$0.71
	BUR_CU		330	35.48	\$0.00	\$0.00	\$0.50
	BUR_FO		1,765	39.97	\$0.00	\$0.00	\$0.48
	COND_CU	613 (FT)		20.14	\$0.00	\$0.00	\$0.20
	COND_FO	2,891 (FT)		34.13	\$0.00	\$0.00	\$0.35
	COND_FO9	1,258 (FT)		20.63	\$0.00	\$0.00	\$0.21
	PAIR_GN	0.35		175.64	\$0.00	\$0.00	\$3.03
	POLE_CU	826 (FT)		34.44	\$0.00	\$0.00	\$0.39
	POLE_FO	4,882 (FT)		96.97	\$0.00	\$0.00	\$1.08
	SAI	1.00		66.42	\$0.00	\$0.00	\$0.96
	UGD_CU		613	10.46	\$0.00	\$0.00	\$0.15
	UGD_FO		4,148	33.02	\$0.00	\$0.00	\$0.40
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FDR	XXX		12,564	657.79	\$0.00	\$0.00	\$8.97
REVENU	REVENU_T	0.00		0.00	\$23.85	\$0.00	\$0.00
STDSVC	ACCT	1.00		0.00	\$0.00	\$0.01	\$0.00
	ADV_MKT	1.00		0.00	\$0.00	\$0.00	\$0.00
	BILLING	1.00		0.00	\$0.00	\$0.71	\$0.00
	COMMON	1.00		0.00	\$0.00	\$9.52	\$0.00
	DA	1.00		0.00	\$0.00	\$3.27	\$0.00
	EMPSUPT	1.00		0.00	\$0.00	\$0.30	\$0.00
	ENG_MV	1.00		0.00	\$0.00	\$0.01	\$0.00
	GPC_IS	1.00		0.00	\$0.00	\$0.42	\$0.00
	MISC	1.00		0.00	\$0.00	\$0.52	\$0.00
	NREC	1.00		0.00	\$0.00	\$1.19	\$0.00
	NVS_EXP	1.00		0.00	\$0.00	\$0.11	\$0.00
	NVS_INV	1.00		0.00	\$0.00	\$0.00	\$0.01
	OCS	1.00		0.00	\$0.00	\$0.24	\$0.00
	O_MINUS	1.00		0.00	\$0.00	\$0.39	\$0.00
	REPR_MTC	1.00		0.00	\$0.00	\$11.55	\$0.00
	SALES	1.00		0.00	\$0.00	\$0.17	\$0.00
	SEC_INV	1.00		0.00	\$0.00	\$0.00	\$3.56
	SHARED	1.00		0.00	\$0.00	\$12.82	\$0.00
	TESTING	1.00		0.00	\$0.00	\$0.00	\$0.00
	WP_LIST	1.00		0.00	\$0.00	\$1.09	\$0.00
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STDSVC	XXX			0.00	\$0.00	\$42.33	\$3.57
SW/IO	SW_LT	1.00		113.69	\$0.00	\$0.00	\$1.67
	SW_MSG_F	108.86		85.53	\$0.00	\$0.00	\$1.25
	SW_SHR	15.97		15.97	\$0.00	\$0.00	\$0.23
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SW/IO	XXX			215.19	\$0.00	\$0.00	\$3.15
XXX	XXX		16,431	1,815.81	\$23.85	\$42.33	\$28.70

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SUBSIDY PER LINE: \$47.18      TOTAL COMPANY SUBSIDY: \$79,323

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COST PROXY MODEL (CPM)  
PRELIMINARY OUTPUT  
COMPANY SPECIFIC DATA

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COMPANY : CITIZENS

LINES : 59,926

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FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT (\$)	REVENUE (\$/MO)	OPERATING EXPENSE (\$/MO)	CAPITAL COST (\$/MO)
-----	-----	-----	-----	---	-----	-----	-----
DST	AER_CU		1,112	77.30	\$0.00	\$0.00	\$1.20
	BUR_CU		2,599	252.73	\$0.00	\$0.00	\$3.56
	COND_CU	291 (FT)		16.98	\$0.00	\$0.00	\$0.17
	DROP	1.00		91.14	\$0.00	\$0.00	\$1.28
	POLE_CU	1,112 (FT)		89.76	\$0.00	\$0.00	\$1.00
	TERMINAL	1.00		116.00	\$0.00	\$0.00	\$1.68
	UGD_CU		291	10.85	\$0.00	\$0.00	\$0.16
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DST	XXX		4,003	654.77	\$0.00	\$0.00	\$9.05
FDR	AER_CU		627	18.34	\$0.00	\$0.00	\$0.28
	AER_FO		4,555	58.91	\$0.00	\$0.00	\$0.72
	BUR_CU		189	12.91	\$0.00	\$0.00	\$0.18
	BUR_FO		1,579	32.89	\$0.00	\$0.00	\$0.40
	COND_CU	1,449 (FT)		28.21	\$0.00	\$0.00	\$0.29
	COND_FO	4,100 (FT)		25.79	\$0.00	\$0.00	\$0.26
	COND_FO9	2,413 (FT)		20.77	\$0.00	\$0.00	\$0.21
	PAIR_GN	0.47		206.22	\$0.00	\$0.00	\$3.56
	POLE_CU	627 (FT)		16.98	\$0.00	\$0.00	\$0.19
	POLE_FO	4,555 (FT)		96.96	\$0.00	\$0.00	\$1.08
	SAI	1.00		40.59	\$0.00	\$0.00	\$0.59
	UGD_CU		1,449	20.31	\$0.00	\$0.00	\$0.29
	UGD_FO		6,513	34.15	\$0.00	\$0.00	\$0.42
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FDR	XXX		14,913	613.04	\$0.00	\$0.00	\$8.47
REVENU	REVENU_T	0.00		0.00	\$21.35	\$0.00	\$0.00
STDSVC	ACCT	1.00		0.00	\$0.00	\$0.01	\$0.00
	ADV_MKT	1.00		0.00	\$0.00	\$0.00	\$0.00
	BILLING	1.00		0.00	\$0.00	\$0.31	\$0.00
	COMMON	1.00		0.00	\$0.00	\$4.12	\$0.00
	DA	1.00		0.00	\$0.00	\$1.41	\$0.00
	EMPSUPT	1.00		0.00	\$0.00	\$0.13	\$0.00
	ENG_MV	1.00		0.00	\$0.00	\$0.01	\$0.00
	GPC_IS	1.00		0.00	\$0.00	\$0.18	\$0.00
	MISC	1.00		0.00	\$0.00	\$0.23	\$0.00
	NREC	1.00		0.00	\$0.00	\$0.52	\$0.00
	NVS_EXP	1.00		0.00	\$0.00	\$0.05	\$0.00
	NVS_INV	1.00		0.00	\$0.00	\$0.00	\$0.00
	OCS	1.00		0.00	\$0.00	\$0.10	\$0.00
	O_MINUS	1.00		0.00	\$0.00	\$0.17	\$0.00
	REPR_MTC	1.00		0.00	\$0.00	\$4.99	\$0.00
	SALES	1.00		0.00	\$0.00	\$0.07	\$0.00
	SEC_INV	1.00		0.00	\$0.00	\$0.00	\$1.54
	SHARED	1.00		0.00	\$0.00	\$5.54	\$0.00
	TESTING	1.00		0.00	\$0.00	\$0.00	\$0.00
	WP_LIST	1.00		0.00	\$0.00	\$0.47	\$0.00
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STDSVC	XXX			0.00	\$0.00	\$18.30	\$1.54
SW/IO	SW_LT	1.00		123.40	\$0.00	\$0.00	\$1.81
	SW_MSG_P	113.02		88.09	\$0.00	\$0.00	\$1.29
	SW_SHR	11.56		11.56	\$0.00	\$0.00	\$0.17
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SW/IO	XXX			223.06	\$0.00	\$0.00	\$3.27
XXX	XXX		18,916	1,490.87	\$21.35	\$18.30	\$22.34

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SUBSIDY PER LINE: \$19.28

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TOTAL COMPANY SUBSIDY: \$1,155,564

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COST PROXY MODEL (CPM)  
PRELIMINARY OUTPUT  
COMPANY SPECIFIC DATA

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COMPANY : CITIZENS TUOLOMNE

LINES : 5,325

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FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT (\$)	REVENUE (\$/MO)	OPERATING EXPENSE (\$/MO)	CAPITAL COST (\$/MO)
-----	-----	-----	-----	-----	-----	-----	-----
DST	AER_CU		1,958	124.31	\$0.00	\$0.00	\$1.93
	BUR_CU		3,417	293.74	\$0.00	\$0.00	\$4.14
	COND_CU	191 (FT)		17.23	\$0.00	\$0.00	\$0.17
	DROP	1.00		134.55	\$0.00	\$0.00	\$1.89
	POLE_CU	1,958 (FT)		136.95	\$0.00	\$0.00	\$1.53
	TERMINAL	1.00		187.33	\$0.00	\$0.00	\$2.72
	UGD_CU		191	8.25	\$0.00	\$0.00	\$0.12
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DST	XXX		5,566	902.36	\$0.00	\$0.00	\$12.50
FDR	AER_CU		388	10.32	\$0.00	\$0.00	\$0.16
	AER_FO		9,469	101.40	\$0.00	\$0.00	\$1.24
	BUR_CU		114	6.06	\$0.00	\$0.00	\$0.09
	BUR_FO		3,305	49.94	\$0.00	\$0.00	\$0.60
	COND_CU	732 (FT)		16.44	\$0.00	\$0.00	\$0.17
	COND_FO	6,214 (FT)		57.30	\$0.00	\$0.00	\$0.58
	COND_FO9	3,006 (FT)		34.00	\$0.00	\$0.00	\$0.34
	PAIR_GN	0.69		313.74	\$0.00	\$0.00	\$5.41
	POLE_CU	388 (FT)		9.15	\$0.00	\$0.00	\$0.10
	POLE_FO	9,469 (FT)		166.71	\$0.00	\$0.00	\$1.86
	SAI	1.00		51.22	\$0.00	\$0.00	\$0.74
	UGD_CU		732	10.72	\$0.00	\$0.00	\$0.16
	UGD_FO		9,220	69.62	\$0.00	\$0.00	\$0.85
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FDR	XXX		23,228	896.64	\$0.00	\$0.00	\$12.31
REVENU	REVENU_T	0.00		0.00	\$15.70	\$0.00	\$0.00
STDSVC	ACCT	1.00		0.00	\$0.00	\$0.01	\$0.00
	ADV_MKT	1.00		0.00	\$0.00	\$0.00	\$0.00
	BILLING	1.00		0.00	\$0.00	\$0.66	\$0.00
	COMMON	1.00		0.00	\$0.00	\$8.78	\$0.00
	DA	1.00		0.00	\$0.00	\$3.01	\$0.00
	EMPSUPT	1.00		0.00	\$0.00	\$0.28	\$0.00
	ENG_MV	1.00		0.00	\$0.00	\$0.01	\$0.00
	GPC_IS	1.00		0.00	\$0.00	\$0.39	\$0.00
	MISC	1.00		0.00	\$0.00	\$0.48	\$0.00
	NREC	1.00		0.00	\$0.00	\$1.10	\$0.00
	NVS_EXP	1.00		0.00	\$0.00	\$0.11	\$0.00
	NVS_INV	1.00		0.00	\$0.00	\$0.00	\$0.01
	OCS	1.00		0.00	\$0.00	\$0.22	\$0.00
	O_MINUS	1.00		0.00	\$0.00	\$0.36	\$0.00
	REPR_MTC	1.00		0.00	\$0.00	\$10.66	\$0.00
	SALES	1.00		0.00	\$0.00	\$0.15	\$0.00
	SEC_INV	1.00		0.00	\$0.00	\$0.00	\$3.29
	SHARED	1.00		0.00	\$0.00	\$11.83	\$0.00
	TESTING	1.00		0.00	\$0.00	\$0.00	\$0.00
	WP_LIST	1.00		0.00	\$0.00	\$1.00	\$0.00
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STDSVC	XXX			0.00	\$0.00	\$39.06	\$3.29
SW/IO	SW_LT	1.00		140.65	\$0.00	\$0.00	\$2.06
	SW_MSG_F	106.24		83.80	\$0.00	\$0.00	\$1.23
	SW_SHR	12.13		12.13	\$0.00	\$0.00	\$0.18
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SW/IO	XXX			236.58	\$0.00	\$0.00	\$3.47
XXX	XXX		28,794	2,035.58	\$15.70	\$39.06	\$31.56

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SUBSIDY PER LINE: \$54.92

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TOTAL COMPANY SUBSIDY: \$292,458

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COST PROXY MODEL (CPM)  
PRELIMINARY OUTPUT  
COMPANY SPECIFIC DATA

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COMPANY : CONTEL

LINES : 278,198

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FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT (\$)	REVENUE (\$/MO)	OPERATING EXPENSE (\$/MO)	CAPITAL COST (\$/MO)
-----	-----	-----	-----	-----	-----	-----	-----
DST	AER_CU		934	62.61	\$0.00	\$0.00	\$0.97
	BUR_CU		2,297	227.59	\$0.00	\$0.00	\$3.20
	COND_CU	277 (FT)		15.07	\$0.00	\$0.00	\$0.15
	DROP	1.00		84.57	\$0.00	\$0.00	\$1.19
	POLE_CU	934 (FT)		71.11	\$0.00	\$0.00	\$0.80
	TERMINAL	1.00		109.25	\$0.00	\$0.00	\$1.58
	UGD_CU		277	9.77	\$0.00	\$0.00	\$0.14
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DST	XXX		3,507	579.97	\$0.00	\$0.00	\$8.04
FDR	AER_CU		559	14.00	\$0.00	\$0.00	\$0.22
	AER_FO		2,768	35.41	\$0.00	\$0.00	\$0.43
	BUR_CU		147	8.14	\$0.00	\$0.00	\$0.11
	BUR_FO		890	20.44	\$0.00	\$0.00	\$0.25
	COND_CU	1,766 (FT)		33.23	\$0.00	\$0.00	\$0.34
	COND_FO	3,882 (FT)		22.89	\$0.00	\$0.00	\$0.23
	COND_FO9	2,250 (FT)		16.18	\$0.00	\$0.00	\$0.16
	PAIR_GN	0.44		179.44	\$0.00	\$0.00	\$3.10
	POLE_CU	559 (FT)		11.94	\$0.00	\$0.00	\$0.13
	POLE_FO	2,768 (FT)		59.21	\$0.00	\$0.00	\$0.66
	SAI	1.00		33.27	\$0.00	\$0.00	\$0.48
	UGD_CU		1,766	24.26	\$0.00	\$0.00	\$0.35
	UGD_FO		6,132	26.97	\$0.00	\$0.00	\$0.33
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FDR	XXX		12,263	485.36	\$0.00	\$0.00	\$6.80
REVENU	REVENU_T	0.00		0.00	\$20.35	\$0.00	\$0.00
STDSVC	ACCT	1.00		0.00	\$0.00	\$0.01	\$0.00
	ADV_MKT	1.00		0.00	\$0.00	\$0.00	\$0.00
	BILLING	1.00		0.00	\$0.00	\$0.33	\$0.00
	COMMON	1.00		0.00	\$0.00	\$4.44	\$0.00
	DA	1.00		0.00	\$0.00	\$1.52	\$0.00
	EMPSUPT	1.00		0.00	\$0.00	\$0.14	\$0.00
	ENG_MV	1.00		0.00	\$0.00	\$0.01	\$0.00
	GPC_IS	1.00		0.00	\$0.00	\$0.20	\$0.00
	MISC	1.00		0.00	\$0.00	\$0.24	\$0.00
	NREC	1.00		0.00	\$0.00	\$0.56	\$0.00
	NVS_EXP	1.00		0.00	\$0.00	\$0.05	\$0.00
	NVS_INV	1.00		0.00	\$0.00	\$0.00	\$0.00
	OCS	1.00		0.00	\$0.00	\$0.11	\$0.00
	O_MINUS	1.00		0.00	\$0.00	\$0.18	\$0.00
	REPR_MTC	1.00		0.00	\$0.00	\$5.38	\$0.00
	SALES	1.00		0.00	\$0.00	\$0.08	\$0.00
	SEC_INV	1.00		0.00	\$0.00	\$0.00	\$1.66
	SHARED	1.00		0.00	\$0.00	\$5.98	\$0.00
	TESTING	1.00		0.00	\$0.00	\$0.00	\$0.00
	WP_LIST	1.00		0.00	\$0.00	\$0.51	\$0.00
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STDSVC	XXX			0.00	\$0.00	\$19.73	\$1.66
SW/IO	SW_LT	1.00		114.41	\$0.00	\$0.00	\$1.68
	SW_MSG_F	112.03		101.40	\$0.00	\$0.00	\$1.49
	SW_SHR	11.99		11.99	\$0.00	\$0.00	\$0.18
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SW/IO	XXX			227.80	\$0.00	\$0.00	\$3.34
XXX	XXX		15,770	1,293.13	\$20.35	\$19.73	\$19.84

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SUBSIDY PER LINE: \$19.22

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TOTAL COMPANY SUBSIDY: \$5,346,266

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COST PROXY MODEL (CPM)  
PRELIMINARY OUTPUT  
COMPANY SPECIFIC DATA

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COMPANY : CP NATIONAL

LINES : 9,762

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FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT (\$)	REVENUE (\$/MO)	OPERATING EXPENSE (\$/MO)	CAPITAL COST (\$/MO)
-----	-----	-----	-----	-----	-----	-----	-----
DST	AER_CU		802	65.11	\$0.00	\$0.00	\$1.01
	BUR_CU		1,669	156.89	\$0.00	\$0.00	\$2.21
	COND_CU	144 (FT)		8.10	\$0.00	\$0.00	\$0.08
	DROP	1.00		95.47	\$0.00	\$0.00	\$1.34
	POLE_CU	802 (FT)		79.19	\$0.00	\$0.00	\$0.89
	TERMINAL	1.00		128.30	\$0.00	\$0.00	\$1.86
	UGD_CU		144	5.07	\$0.00	\$0.00	\$0.07
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DST	XXX		2,615	538.14	\$0.00	\$0.00	\$7.46
FDR	AER_CU		1,025	31.96	\$0.00	\$0.00	\$0.50
	AER_FO		1,527	20.81	\$0.00	\$0.00	\$0.26
	BUR_CU		342	22.14	\$0.00	\$0.00	\$0.31
	BUR_FO		550	11.10	\$0.00	\$0.00	\$0.13
	COND_CU	1,279 (FT)		31.27	\$0.00	\$0.00	\$0.32
	COND_FO	1,322 (FT)		13.28	\$0.00	\$0.00	\$0.13
	COND_FO9	191 (FT)		2.64	\$0.00	\$0.00	\$0.03
	PAIR_GN	0.15		75.90	\$0.00	\$0.00	\$1.31
	POLE_CU	1,025 (FT)		30.38	\$0.00	\$0.00	\$0.34
	POLE_FO	1,527 (FT)		34.31	\$0.00	\$0.00	\$0.38
	SAI	1.00		54.03	\$0.00	\$0.00	\$0.78
	UGD_CU		1,279	19.83	\$0.00	\$0.00	\$0.29
	UGD_FO		1,513	12.69	\$0.00	\$0.00	\$0.15
-----	-----	-----	-----	-----	-----	-----	-----
FDR	XXX		6,236	360.33	\$0.00	\$0.00	\$4.93
REVENU	REVENU_T	0.00		0.00	\$20.35	\$0.00	\$0.00
STDSVC	ACCT	1.00		0.00	\$0.00	\$0.01	\$0.00
	ADV_MKT	1.00		0.00	\$0.00	\$0.00	\$0.00
	BILLING	1.00		0.00	\$0.00	\$0.65	\$0.00
	COMMON	1.00		0.00	\$0.00	\$8.70	\$0.00
	DA	1.00		0.00	\$0.00	\$2.99	\$0.00
	EMPSUPT	1.00		0.00	\$0.00	\$0.28	\$0.00
	ENG_MV	1.00		0.00	\$0.00	\$0.01	\$0.00
	GPC_IS	1.00		0.00	\$0.00	\$0.38	\$0.00
	MISC	1.00		0.00	\$0.00	\$0.48	\$0.00
	NREC	1.00		0.00	\$0.00	\$1.09	\$0.00
	NVS_EXP	1.00		0.00	\$0.00	\$0.10	\$0.00
	NVS_INV	1.00		0.00	\$0.00	\$0.00	\$0.01
	OCS	1.00		0.00	\$0.00	\$0.22	\$0.00
	O_MINUS	1.00		0.00	\$0.00	\$0.35	\$0.00
	REPR_MTC	1.00		0.00	\$0.00	\$10.55	\$0.00
	SALES	1.00		0.00	\$0.00	\$0.15	\$0.00
	SEC_INV	1.00		0.00	\$0.00	\$0.00	\$3.25
	SHARED	1.00		0.00	\$0.00	\$11.72	\$0.00
	TESTING	1.00		0.00	\$0.00	\$0.00	\$0.00
	WP_LIST	1.00		0.00	\$0.00	\$1.00	\$0.00
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STDSVC	XXX			0.00	\$0.00	\$38.68	\$3.26
SW/IO	SW_LT	1.00		98.57	\$0.00	\$0.00	\$1.44
	SW_MSG_F	108.79		87.08	\$0.00	\$0.00	\$1.28
	SW_SHR	10.58		10.58	\$0.00	\$0.00	\$0.15
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SW/IO	XXX			196.23	\$0.00	\$0.00	\$2.87
XXX	XXX		8,850	1,094.70	\$20.35	\$38.68	\$18.53

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SUBSIDY PER LINE: \$36.86

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TOTAL COMPANY SUBSIDY: \$359,857

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